## Release notes for ENDF/B Development e-100\_Fm\_000 evaluation



October 13, 2016

## • fudge-4.0 Warnings:

1. Mislabled emitted particle Reading ENDF file: ../e-100\_Fm\_000.endf (Error # 0): ZAP messed up

WARNING: photon most likely labelled as an electron (ZAP = 11), converting to ZAP = 0

2. FIXME: Generic fudge unimplemented message reaction label 1: e- + Fm + gamma [bremsstrahlung] / Product: e- (Error # 0): Generic unimp (c)

WARNING: Checking not yet implemented for energyLoss type data

3. FIXME: Generic fudge unimplemented message reaction label 2: e- + Fm [excitation] / Product: e- (Error # 0): Generic unimp (c)

WARNING: Checking not yet implemented for energyLoss type data

## • fudge-4.0 Errors:

1. Calculated and tabulated thresholds don't agree reaction label 0: e- + Fm [large angle Coulomb scattering] / Cross section: (Error # 0): Threshold mismatch

WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 10. eV!

2. Calculated and tabulated thresholds don't agree reaction label 1:  $e^- + Fm + gamma$  [bremsstrahlung] / Cross section: (Error # 0): Threshold mismatch

WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 10. eV!

3. Calculated and tabulated thresholds don't agree reaction label 2: e- + Fm [excitation] / Cross section: (Error # 0): Threshold mismatch

WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 10. eV!

4. Calculated and tabulated thresholds don't agree reaction label 3: e- + e- + Fm1s1/2 / Cross section: (Error # 0): Threshold mismatch

WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 142680. eV!

WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 27622. eV!

6. Calculated and tabulated thresholds don't agree reaction label 5: e- + e- + Fm2p1/2 / Cross section: (Error # 0): Threshold mismatch

WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 26792. eV!

7. Calculated and tabulated thresholds don't agree reaction label 6: e- + e- + Fm2p3/2 / Cross section: (Error # 0): Threshold mismatch

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WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 20894. eV!
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- 8. Calculated and tabulated thresholds don't agree reaction label 7: e- + e- + Fm3s1/2 / Cross section: (Error # 0): Threshold mismatch
  - WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 7179.7 eV!
- 9. Calculated and tabulated thresholds don't agree reaction label 8: e- + e- + Fm3p1/2 /  $Cross\ section$ : (Error # 0): Threshold mismatch
  - WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 6784. eV!
- 10. Calculated and tabulated thresholds don't agree reaction label 9: e- + e- + Fm3p3/2 / Cross section: (Error # 0): Threshold mismatch
  - WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 5392.6 eV!
- 11. Calculated and tabulated thresholds don't agree reaction label 10: e- + e- + Fm3d3/2 / Cross section: (Error # 0): Threshold mismatch
  - WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 4760.8 eV!
- 12. Calculated and tabulated thresholds don't agree reaction label 11: e- + e- + Fm3d5/2 / Cross section: (Error # 0): Threshold mismatch
  - WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 4492.7 eV!
- 13. Calculated and tabulated thresholds don't agree reaction label 12: e- + e- + Fm4s1/2 / Cross section: (Error # 0): Threshold mismatch
  - WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 1925.8 eV!
- 14. Calculated and tabulated thresholds don't agree reaction label 13: e- + e- + Fm4p1/2 / Cross section: (Error # 0): Threshold mismatch
  - WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 1739. eV!
- 15. Calculated and tabulated thresholds don't agree reaction label 14: e- + e- + Fm4p3/2 / Cross section: (Error # 0): Threshold mismatch
  - WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 1359.6 eV!
- 16. Calculated and tabulated thresholds don't agree reaction label 15: e- + e- + Fm4d3/2 / Cross section: (Error # 0): Threshold mismatch
  - WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 1061.8 eV!
- 17. Calculated and tabulated thresholds don't agree reaction label 16: e- + e- + Fm4d5/2 / Cross section: (Error # 0): Threshold mismatch
  - WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 994.36 eV!
- 18. Calculated and tabulated thresholds don't agree reaction label 17: e- + e- + Fm4f5/2 / Cross section: (Error # 0): Threshold mismatch
  - WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 600.52 eV!

- 19. Calculated and tabulated thresholds don't agree reaction label 18: e- + e- + Fm4f7/2 / Cross section: (Error # 0): Threshold mismatch
  - WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 581.62 eV!
- 20. Calculated and tabulated thresholds don't agree reaction label 19: e- + e- + Fm5s1/2 / Cross section: (Error # 0): Threshold mismatch
  - WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 446.11 eV!
- 21. Calculated and tabulated thresholds don't agree reaction label 20:  $e^- + e^- + Fm5p1/2$  / Cross section: (Error # 0): Threshold mismatch
  - WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 368.06 eV!
- 22. Calculated and tabulated thresholds don't agree reaction label 21: e- + e- + Fm5p3/2 / Cross section: (Error # 0): Threshold mismatch
  - WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 269.17 eV!
- 23. Calculated and tabulated thresholds don't agree reaction label 22:  $e^- + e^- + Fm5d3/2$  / Cross section: (Error # 0): Threshold mismatch
  - WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 153.89 eV!
- 24. Calculated and tabulated thresholds don't agree reaction label 23: e- + e- + Fm5d5/2 / Cross section: (Error # 0): Threshold mismatch
  - WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 139.29 eV!
- 25. Calculated and tabulated thresholds don't agree reaction label 24: e- + e- + Fm5f5/2 / Cross section: (Error # 0): Threshold mismatch
  - WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 12.29 eV!
- 26. Calculated and tabulated thresholds don't agree reaction label 25: e- + e- + Fm5f7/2 / Cross section: (Error # 0): Threshold mismatch
  - WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 10.18 eV!
- 27. Calculated and tabulated thresholds don't agree reaction label 26: e- + e- + Fm6s1/2 / Cross section: (Error # 0): Threshold mismatch
  - WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 64.849999999999 eV!
- 28. Calculated and tabulated thresholds don't agree reaction label 27:  $e^2 + e^2 + Fm6p1/2 / Cross\ section$ : (Error # 0): Threshold mismatch
  - WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 41.27 eV!
- 29. Calculated and tabulated thresholds don't agree reaction label 28: e- + e- + Fm6p3/2 / Cross section: (Error # 0): Threshold mismatch
  - WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 25.77 eV!

30. Calculated and tabulated thresholds don't agree reaction label 29: e- + e- + Fm7s1/2 / Cross section: (Error # 0): Threshold mismatch

WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 5.85 eV!

- xsectplotter Warnings:
  - $\begin{array}{ccc} 1. & {\rm Mislabled~emitted~particle} \\ & \textit{Error:~ZAP~messed~up} \end{array}$

stderr while processing crossSection

WARNING: photon most likely labelled as an electron (ZAP = 11), converting to ZAP = 0  $\dots$  [4 more lines]